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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/022,753	12/14/2001	Nicholas A. Schuneman	004578.1193	2544

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BAKER BOTTS L.L.P.  
2001 ROSS AVENUE  
SUITE 600  
DALLAS, TX 75201-2980

EXAMINER

CHEN, SHIH CHAO

ART UNIT PAPER NUMBER

2821

DATE MAILED: 12/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/022,753

Applicant(s)

SCHUNEMAN ET AL.

Examiner

Shih-Chao Chen

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_. 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. In response to the communication dated December 14, 2001 through October 17, 2003, claims 1-17 are active in this application.

#### ***Priority***

2. Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged.

#### ***Information Disclosure Statement***

3. The information disclosure statement (IDS) filed on December 14, 2001; February 12, 2002; February 12, 2003; May 28, 2003 and June 20, 2003 have been considered.

#### ***Terminal Disclaimer***

4. The terminal disclaimer filed on October 17, 2003 has been recorded.

#### ***Double Patenting***

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-3, 8-9, and 16-17 are provisionally rejected under the judicially created doctrine of double patenting over claims 5 and 12-13 of copending Application No.

10/023,800. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows:

a conductive section (an electrically conductive plate); a balun portion (balun hole); a slot portion (slot); said slot portion (slot) having edges on opposite sides thereof which each follow a predetermined curve other than a first-order exponential curve; an elongate conductive element which extends generally transversely with respect to said slot portion (slot) in the region of said one end thereof; and said predetermined curve for each said edge is configured to facilitate minimization of return loss for electromagnetic signals induced within said slot portion (slot) through said elongate conductive element.

The apparatus discussed above would perform the claimed method.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-3, 8-9 and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Sugawara (U.S. Patent No. 6,008,770).

Regarding claim 1, Sugawara teaches in figures 1-21 an apparatus, comprising: a conductive section [32] having a recess which includes a balun portion [51] and a slot portion [50], the slot portion [50] communicating at one end with the balun portion [51], and the slot portion [50] having edges on opposite sides thereof (See FIG. 10) which each follow a predetermined curve other than a first-order exponential curve; and an elongate conductive element [52] which extends generally transversely with respect to the slot portion [50] in the region of the one end thereof, and which can carry an electrical signal.

Regarding claim 2, Sugawara teaches in figures 1-21 the apparatus according to Claim 1, wherein the predetermined curve for each the edge is configured to facilitate minimization of return loss for electromagnetic signals induced within the slot portion [50] through the elongate conductive element [52].

Regarding claim 3, Sugawara teaches in figures 1-21 the apparatus according to Claim 1, wherein the predetermined curve for each the edge is configured as a function of characteristics of the balun portion [51] and the slot portion [50] to facilitate minimization of return loss for electromagnetic signals induced within the slot portion [50] by the conductive element [52].

Regarding claim 8, Sugawara teaches in figures 1-21 a method of modeling operational characteristics of an apparatus [40] which includes a conductive section [32]

having a recess with a slot portion [50], comprising the steps of: modeling the slot portion [50] as a plurality of segments of electrically conductive material (See FIG. 10) which collectively have a shape that approximates a shape of the slot portion [50]; and evaluating a characteristic of the slot portion [50] by separately evaluating the characteristic for each of the segments and then combining the evaluations for the segments.

Regarding claim 9, Sugawara teaches in figures 1-21 a method of evaluating an operational characteristic of an apparatus [40] which includes a conductive section [32] having therein a recess with a balun portion [51] and with a slot portion [50] communicating at one end with the balun portion [51], and which includes an elongate conductive element [52] extending generally transversely to the slot portion [50] in the region of the one end thereof, the method comprising the steps of modeling the slot portion [50] as a transmission line having a plurality of electrically conductive segments which collectively have a shape that approximates a shape of the slot portion [50]; and evaluating the operational characteristic for the slot portion [50] by separately evaluating a selected characteristic for each of the segments and then combining the results of the separate evaluations for the segments.

Regarding claim 16, Sugawara teaches in figures 1-21 an apparatus [40], comprising: a conductive section [32] having a recess which includes a balun portion [51] and a slot portion [50], the slot portion [50] communicating at one end with the balun portion [51], and having a width which is narrowest in a first section of the slot portion [50] located near the one end thereof, the slot portion [50] having second and

third sections which are disposed on opposite sides of the first section and which each have a width larger than the width of the first section; and an elongate conductive element [52] which extends generally transversely with respect to the slot portion [50] in the region of the one end thereof.

Regarding claim 17, Sugawara teaches in figures 1-21 a method comprising the steps of: creating in a conductive section [32] a recess which includes a balun portion [51] and a slot portion [50], the slot portion [50] communicating at one end with the balun portion [51], and having a width which is narrowest in a first section of the slot portion [50] located near the one end thereof, the slot portion [50] having second and third sections which are disposed on opposite sides of the first section and which each have a width larger than the width of the first section; and fabricating an elongate conductive element [52] which extends generally transversely with respect to the slot portion [50] in the region of the one end thereof.

### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shih-Chao Chen whose telephone number is (703) 306-2721. The examiner can normally be reached on Monday-Friday from 7 AM to 4:30 PM, First Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (703) 308-4856. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

*Shih-Chao Chen*

Shih-Chao Chen  
Examiner  
Art Unit 2821

SXC  
December 29, 2003